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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,662	07/31/2003	Jean-Pierre Rigal	P23919	9495

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EXAMINER	
BOTTORFF, CHRISTOPHER	

ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,662	RIGAL ET AL.	
	Examiner	Art Unit	
	Christopher Bottorff	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24-32* is/are allowed.

6)☒ Claim(s) *1-9,11,16,17 and 19-23* is/are rejected.

7)☒ Claim(s) *10, 12-15, 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed May 17, 2005 has been entered. Claims 11-32 are added. Claims 1-32 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitations "the median arm," "said second T-shaped portion," and "said plate" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 11, 16, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornu US 4,121,854 in view of Martin US 6,659,494.

Cornu discloses an assembly comprising a release block having at least one jaw 2. See Figure 1. The jaw 2 is mounted for movement between a closed, boot-retaining position and an open, boot-releasing position. See Figures 1 and 4. A movable latch 9 and a source of pneumatic energy 22 for controlling movement of the latch 9 are also provided. See Figure 1 and column 3, lines 57-59.

The movable latch 9 is tilted by an air jack 24, 25, which is controlled by the source of pneumatic energy, for allowing opening of the jaw 2. See column 3, lines 50-52. The system accommodating the source of pneumatic energy 22 and the air jack 24, 25 forms a control system for moving the latch 9. The latch 9 is a rocker movable about an axle 10 with an upper arm 11 oriented in a position for closing the jaw 2, so that the force component passes through the axle 10 for rotating the rocker. See Figure 1. The latch 9 is also elastically returned to the position for closing the jaw 2 by a spring 6. See Figure 1.

The latch is movable between a blocking position (depicted in Figure 1) and an unblocking position (depicted in Figure 4). In the blocking position, the latch blocks movement of the jaw to the open, boot-releasing position. See Figure 1. In the unlocking position, the latch allows movement of the jaw to the open, boot-releasing position. See Figure 4. In moving from the blocking position to the unblocking position, the latch is movable from a position in engagement with a surface to block movement of the jaw to a position spaced from the surface. That is, the latch is engaged with a first lower surface of jaw 2 closest to pin 3 when the jaw is prevented from opening (Figure 1) and, when the jaw is allowed to open (Figure 4), the latch is engaged with a separate,

second surface of jaw 2 that is further from pin 3 than the first surface. In moving from the position depicted in Figure 1 to the position depicted in Figure 2, the latch moves from a position engaged with a first surface to a position spaced from the first surface.

The pneumatic energy of Cornu is delivered by a pyrotechnic charge rather than by a solenoid valve connected to a reservoir of pressurized gas with a pressure regulator positioned at an outlet of the gas reservoir. However, Martin teaches the desirability of delivering pneumatic energy to an assembly by a solenoid valve 1305 connected to a reservoir of pressurized gas 18 with a pressure regulator 1307 positioned at an outlet of the gas reservoir 18. See Figure 13; column 5, lines 9-10 and 18-20; and column 6, lines 40-42. From the teachings of Martin, delivering the pneumatic energy of Cornu by a solenoid valve connected to a reservoir of pressurized gas with a pressure regulator positioned at an outlet of the gas reservoir, rather than by a pyrotechnic charge, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would provide an effective system for storing and delivering high pressure gas and would eliminate the hazards associated with the combustion of a pyrotechnic device. Furthermore, this combination would produce a control system for moving latch 9 that includes a solenoid valve operatively interposed between a reservoir of pressurized gas and an air jack.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornu US 4,121,854 in view of Martin US 6,659,494 as applied to claim 17 above, and further in view of Salomon US 4,383,702.

Cornu, as modified by Martin, does not disclose that the control system further comprises a module for detecting, analyzing, and processing forces and for sending a control signal, wherein the forces are detected by stress gauges on a plate having a bending zone and a support is positioned beneath the plate.

However Salomon teaches the desirability of mounting a jaw 8 on a plate 1 having a bending zone in which stress gauges 11-14, 21-24, and 31-34 are positioned. See Figures 1 and 2; column 2, lines 61-68; and column 3, lines 1-50. A processing circuit 91 connects the stress gauges to a locking member 9a for opening a jaw 8. See Figure 3; column 3, lines 66-68; and column 4, lines 1-7. The processing circuit and stress gauges cooperate to detect, analyze, and process forces between the boot and the gliding board during gliding and to send a control signal to cause the opening of jaw 8. Salomon further teaches the desirability of positioning a support plate 10 under the plate. See Figures 1 and 2 and column 4, lines 22-23.

From the teachings of Salomon, mounting the jaw of Cornu on a plate having a bending zone in which stress gauges are positioned, and which stress gauges are connected to a processing circuit, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would allow for the determination of stresses produced at the time of skiing for determining an appropriate time to release a boot from the jaw. From the further teachings of Salomon, positioning a support plate under the plate of Cornu would have been obvious to one of ordinary skill in the art at the time the invention was made. This would aid in fixing the plate to the ski and would have the effect of raising the bending zone from the ski. Furthermore, this combination

would provide the control system formed by the teachings of Cornu and Martin with a module for detecting, analyzing, and processing forces and for sending a control signal to the device that initiates the opening of jaw 2 for movement of said movable latch 9.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornu US 4,121,854 in view of Martin US 6,659,494 as applied to claim 16 above, and further in view of Dimier et al. US 4,589673.

Cornu discloses his assembly in general terms without limiting its use to either the front or rear binding. As a result, Cornu does not disclose the assembly as specifically forming a part of a front binding in a front and rear binding system. Cornu also does not disclose that the jaw comprises a pair of lateral wings.

However, Dimier et al. teach the desirability of providing a pneumatic boot retention and release mechanism as a part of a front binding in a front and rear binding system. See Figure 11 and note column 6, lines 12-13. Dimier et al. further teach the desirability of providing a jaw with a pair of lateral wings 10. See Figure 1. From the teachings of Dimier et al., providing the assembly produced by the combination of Cornu, as modified by Martin, as a part of a front binding in a front and rear binding system would have been obvious to one of ordinary skill in the art at the time the invention was made. This would provide for the selective release of a front portion of a user's foot. From the further teachings of Dimier et al., providing the jaw of Cornu with a pair of lateral wings would have been obvious to one of ordinary skill in the art at the

time the invention was made. This would provide a configuration that effectively retains a boot sole.

Allowable Subject Matter

Claims 24-32 are allowed. The prior art does not teach the specific plate structure defined in column 24. Thus, this feature, in combination with the further limitations of claim 24, distinguishes the claimed invention over the prior art.

Claims 10, 12-15, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 10 forbids the latch from forcing movement of the jaw to the open position, which is not taught by the prior art. As Applicants note in the remarks filed May 17, 2005, latch 9 of Cornu forces the movement of jaw 2 to the open position. Claims 12 and 14 define aspects of the plate structure that are not taught by the prior art. Also, the prior art does not teach a pressure regulator positioned between a reservoir of pressurized gas and a solenoid valve, in combination with the further limitations of claim 18.

Claims 7-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claim 7 also defines distinguishing aspects of the plate.

Response to Arguments

Applicant's arguments filed May 17, 2005 have been fully considered but they are not persuasive.

In regard to the rejection of claim 8 under 35 USC 112, second paragraph, the expressions "the plate" and the "bending zone" do not find antecedent basis in claim 11 as Applicants contend.

The previous rejection under 35 USC 102(b) in view of Cornu is withdrawn. However, Cornu remains applicable to the rejection of the claims under 35 USC 103.

In regard to claim 4, Applicants assert that the limitation "allowing opening of the jaw" distinguishes the claimed invention over Cornu because latch 9 of Cornu "forces" or "constrains" jaw 2. Applicants position suggests that forcing the jaw to open does not allow the jaw to open. However, the term "allowing," as it is used in the claims, merely requires that the jaw be permitted to move. Latch 9 does not resist or prevent the opening of the jaw, but permits jaw 2 to move as jaw 2 is acted upon by latch 9. Thus, jaw 2 of Cornu is allowed to be opened as required by claim 4. If such opening were not allowed, then jaw 2 would not open when acted upon by latch 9. This is also true in relation to new claim 16.

Applicants assert that the combination of Cornu and Martin is improper because the combustion of Cornu allegedly does not appear to create a hazard, eliminating the pyrotechnic aspect of Cornu's device would allegedly destroy an essential element of the device, and the device of Cornu allegedly appears to require significantly more energy than the device of Martin.

However, the presence of combustion in the gas source of Cornu involves an explosion, which is an inherently hazardous phenomenon. Although Cornu has taken measures to reduce the hazards associated with combustion, the inherently hazardous nature of the explosive device cannot be eliminated as long as the combustion process may occur.

In addition, eliminating the pyrotechnic aspect of Cornu's device would not destroy an essential element of the device. The discharge of gas is an essential element of the device, but the source of that gas is not essential. Contrary to Applicants' assertion, using a compressed gas source would still provide the essential discharge of gas and allow the device to operate as intended.

Furthermore, the contention that the device of Cornu "appears" to require significantly more energy than the device of Martin is unsubstantiated speculation. The required degree of energy is not specified by Cornu. Rather, Applicants speculate what might be required. Moreover, Applicants have not established that a compressed gas source could not produce the amount of energy required by Cornu. The examiner submits that significant amounts of energy, if required, can be provided by either a pyrotechnic gas source or a compressed gas source. The amount of energy required by Cornu does not undermine the combination of Cornu and Martin.

In regard to new claims 11-32, the examiner agrees with several of Applicants' statements and has indicated that several of the new claims contain allowable subject matter. However, the examiner does not agree with all of Applicants' statements and the rejection of several of the new claims is discussed above.

New claim 11, in particular, requires the latch to be movable from a position in engagement with a surface to block movement of the jaw to a position spaced from that surface. This does not forbid the latch from being in continuous engagement with the jaw, and allows the latch to be engaged with a separate surface in each of the separate positions. Only, engagement with the same surface in each of the positions is forbidden.

As this limitation of claim 11 relates to Cornu, the jaw 2 of Cornu includes what may be characterized, in one frame of reference, as a continuous surface 12. In this frame of reference, all of the interconnected outer sides (top side, lower side, front side, rear side, etc.) of jaw 2 may be characterized as one continuous surface despite their varying directions and angles. However, jaw 2 may be viewed from a different perspective in which the various sides (top side, lower side, front side, rear side, etc.) are characterized as representing distinct surfaces that are separated by variations in their directions and angles, yet interconnected. From this perspective, the portion of jaw 2 represented by the numeral 12 may be characterized as including numerous distinct surfaces separated by the variations in their directions and angles, yet interconnected. In this frame of reference, the latch 9 is engaged with a first lower surface of jaw 2 closest to pin 3 when the jaw is prevented from opening (Figure 1) and, when the jaw is allowed to open (Figure 4), the latch is engaged with a separate, second surface of jaw 2 that is further from pin 3 than the first surface. In moving from the position depicted in Figure 1 to the position depicted in Figure 2, the latch moves from a position engaged with a first surface to a position spaced from the first surface.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (571) 272-6692. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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